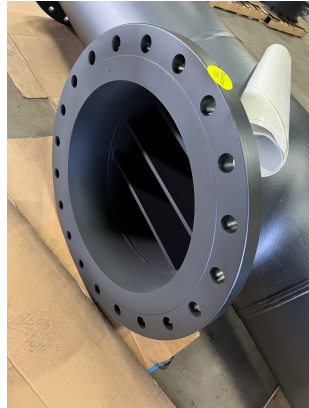
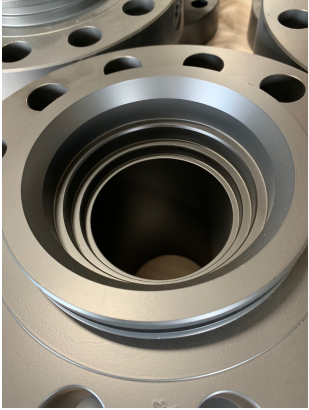
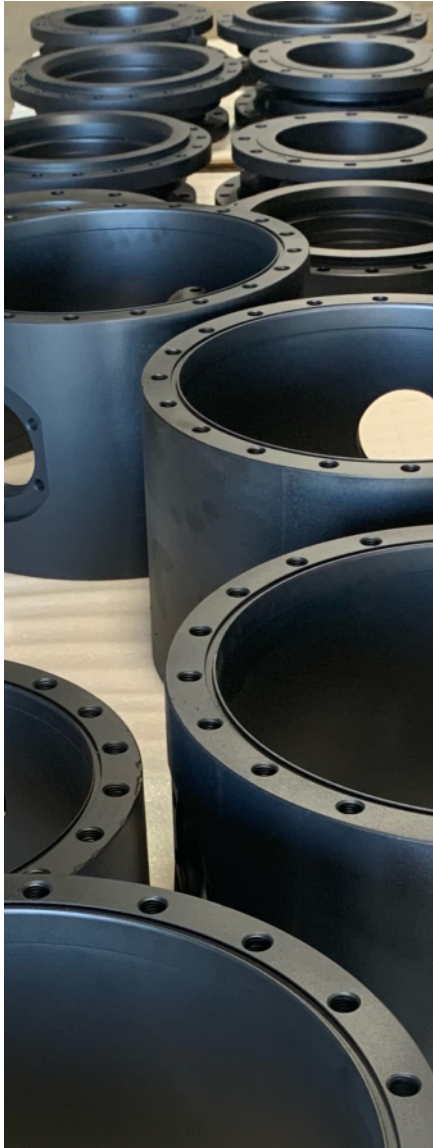


ZPEX

by ecoat.us



• NO OVER-MACHINING • NO MASKING



ZPEX is a factory applied, proprietary coating system that in most cases can replace stainless steel and other exotic metallurgies.

The ZPEX coating system consists of an electro-deposited epoxy primer (ecoat), cross linked with a fluoropolymer topcoat. The ecoat primer, or Cathodikote (our brand of Ecoat), is applied when the part is completely submerged (Full Coating Encapsulation) in a series of 10 tanks with multiple stages for cleaning, rinsing, pre-treatment, and Ecoat. The Ecoat is an electro-deposited epoxy, which is very thin and very chemical resistant, with second to none adhesion to the substrate.

The second part of the process is the fluoropolymer topcoat which crosslinks with the Ecoat primer. This coat is selectively spray applied to the fluid/potential corrosion areas of the components. The end result is very even and thin, very chemical resistant and slick coating that can be applied to threads, balls, seats, and any other low tolerance areas of equipment within valves, pumps, and manifolds.

AUTOCLAVE TESTING

This 74 Day - D4060 (Intentional Scribe) Autoclave Test included 11 coatings used heavily throughout Oil & Gas - from manufacturers including, but not limited too, Sherwin Williams, Carboline, Akzo Nobel, and NOV... **Zpex Finished First.**



30 Day Surface Test Conditions (30 days):

- 750 PSI
- 98° F Temp.
- CO2 = 450 ppm
- H2S = 300 ppm
- O2 = 60 ppb
- Min. 20% Brine
- 80% Wellhead Fluid
- pH 7.5

30 Day Sub-Surface Test Conditions (30 days):

- 5,000 PSI
- 200° F Operating Temp.
- CO2 = 3.5 mole
- H2S = 300 ppm
- O2 = 12 ppb
- Min. 20% Brine
- 80% Wellhead Fluid
- pH 5

Following surface and subsurface testing, samples went through 14 day - 1.5 pH Acid Immersion Test and were then scraped.

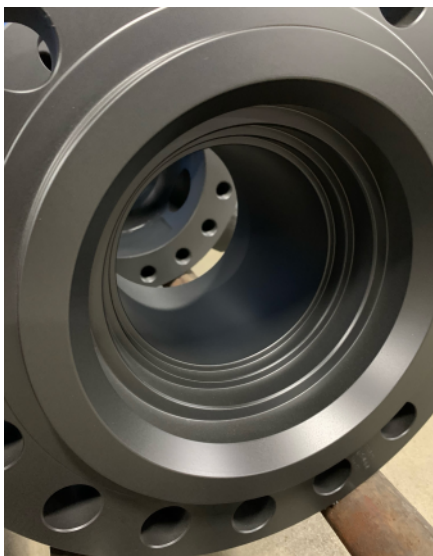
FIELD TESTING

Zpex coated check valves vs. non-coated.

Same environment for the same amount time. Approx. 6 months.

Both flappers are 410 stainless steel.

The Zpex coated valves & flappers were found to have no issues during inspection, were re-tested and put back into service.



Zpex Coating - Permian Basin Integrity Check

Product: Zpex coated Carbon x Stainless (In lieu of full SS) 16" CL300 valves, and piping, coated for a major producer on their SWD pig launching skids.

Environment: Produced water, around 20-30,000 barrels per day with sand and other particulates present. In service for 10-11 months.

Conclusion: These were pulled at the request of their Asset Integrity group to inspect how the coating is holding up. The asset integrity consultant, engineers and corrosion inspector were all very pleased in that the coating showed no signs of damage or degradation, noting that 'the coating looked brand new'.



PUMPS

- NO MASKING
- INCREASED FLOW EFFICIENCIES

ZPEX is a factory applied, proprietary coating system that in most cases can replace stainless steel and other exotic metallurgies in salt water & H2S.

The ZPEX coating system consists of an electro-deposited epoxy primer (ecoat), cross linked with a fluoropolymer topcoat. The ecoat primer, or Cathodikote (our brand of Ecoat), is applied when the part is completely submerged (Full Coating Encapsulation) in a series of 10 tanks with multiple stages for cleaning, rinsing, pre-treatment, and Ecoat. The Ecoat is an electro-deposited epoxy, which is very thin and very chemical resistant, with second to none adhesion to the substrate.

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FIELD TESTING - For corrosion resistance & flow rates.

